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ABSTRACT

0028 A method for forming salicides with reduced junction leakage including providing a semiconductor process wafer comprising a silicon substrate; inducing amorphization within the silicon substrate to form a first amorphous region having a first predetermined depth measured from the silicon substrate surface; carrying out at least one first thermal annealing process to controllably partially recrystallize the first amorphous region to produce a second amorphous region having a second predetermined depth less than the first predetermined depth; depositing a metal layer over selected areas of the silicon substrate comprising the second amorphous region; and, carrying out at least one second thermal annealing process to form a metal silicide.